NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a Federal Enforceable State Operating Permit

for American Silicones, Inc.
in Dekalb County

FESOP No.: F033-14394-00075

Notice is hereby given that the above-mentioned company, located at 420 North Taylor Street in Garret, Indiana, 46738, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP) for an amphorus silicone dioxide manufacturing operation. Based on 8760 hours per year of operation, the potential to emit of volatile organic compounds is 50 tons per year.

Notice is hereby given that there will be a period of thirty (30) days from the date of publication of this notice during which any interested person may comment on why this proposed permit should or should not be issued. Appropriate comments should be related to any air quality issues, interpretation of the state and federal rules, calculations made, technical issues, or the effect that the operation of this source would have on any aggrieved individuals. IDEM, OAQ does not have jurisdiction in specifying and implementing requirements for zoning, odor or noise. For such issues, please contact your local officials.

A copy of the application and draft permit is available for examination at the Garrett Public Library, 107 West Houston, in Garrett, Indiana, 46738-1494 and Northern Regional Office, 220 West Colfax Avenue, Suite 200, South Bend, IN 46601-1634. A copy of the draft permit is also available for examination at www.state.in.us/idem/OAQ/index.html. All statements, along with supporting documentation, should be submitted in writing to the IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015. If adverse comments concerning the air pollution impact of this draft source are received, together with a request for a public hearing, such a hearing may be held to give further consideration to this application.

Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the OAQ, at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have fifteen (15) days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice.

Questions should be directed to Scott Fulton, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Scott Fulton or extension (3-5691, or dial (317) 233-5691.

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

SDF

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) and ENHANCED NEW SOURCE REVIEW OFFICE OF AIR QUALITY

American Silicones, Inc.
420 North Taylor Road
Garrett, Indiana 46738

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F033-14394-00075	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 2, 2002 Expiration Date: January 2, 2007

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a amphorus silicone dioxide manufacturing operation.

Authorized individual:	Tom Lapsley
Source Address:	420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address:	P.O. Box 90, Garrett, IN 46738-0090
SIC Code:	2869
Source Location Status:	Dekalb
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD or Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

one (1) polydimethylsiloxane mixing operation consisting of one (1) 60,000 pound bulk storage silo and:

(a) One (1) mixing process, identified as Mixing Process #1, including one (1) 2,200 pound raw material silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 2,500 pounds per batch (313 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting emissions inside the building;

(b) One (1) mixing process, identified as Mixing Process #2, including one (1) 2,200 pound raw material storage silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting emissions inside the building;

(c) One (1) mixing process, identified as Mixing Process #3, including one (1) 2,200 pound raw material storage silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting inside the building; and

(d) One (1) small batch mixing operation, identified as small mixing operation, including five (5) mixing processes, with maximum throughputs of 2,000, 1,000, 500, 200, and 100 pounds per batch, respectively.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(b) Degreasing Operations that do not exceed 145 gallons per 12 months.

(c) Cleaners and solvent characterized as:

(1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F), or
(2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20 degrees C (68°F),

the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(d) Closed loop heating and cooling systems.

(e) Paved and unpaved roads and parking lots with public access, and

(f) One (1) laboratory as defined in 326 IAC 2-7-1(20)(C).

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Conditions

(a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]

(c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit, except those specifically designated as not federally enforceable, is grounds for:

(1) Enforcement action;

(2) Permit termination, revocation and reissuance, or modification; and

(3) Denial of a permit renewal application.

(b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.14 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, Northern Regional Office, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

Northern Regional Office
220 West Colfax Ave., Ste. 200
South Bend, IN 46601-1634
219-245-4870

Failure to notify IDEM, OAQ, Northern Regional Office, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.

The notification by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

A Permittee’s failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

(c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15]

(a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

(c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]
A modification, construction, or reconstruction is governed 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action, or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.9 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.10 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

C.13 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.15 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:

(A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps may constitute a violation of the permit.

(c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.

(f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, any quarterly or semi-annual report(s) required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report(s) does/do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

(a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156

(b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

one (1) polydimethylsiloxane manufacturing operation consisting of one (1) 60,000 pound bulk storage silo and:

(a) One (1) mixing process, identified as Mixing Process #1, including one (1) 2,200 pound raw material silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 2,500 pounds per batch (313 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting emissions inside the building;

(b) One (1) mixing process, identified as Mixing Process #2, including one (1) 2,200 pound raw material storage silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting emissions inside the building;

(c) One (1) mixing process, identified as Mixing Process #3, including one (1) 2,200 pound raw material storage silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting inside the building; and

(d) One (1) small batch mixing operation, identified as small mixing operation, including five (5) mixing processes, with maximum throughputs of 2,000, 1,000, 500, 200, and 100 pounds per batch, respectively.

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Volatile Organic Compound (VOC) Emissions [326 IAC 8-1-6 and 326 IAC 2-7]

The volatile organic compounds (VOC) from all materials used at Mixing Process 1, Mixing Process 2**,** Mixing Process 3, and the small mixing operation, each, shall be limited to less than or equal to 24.7 tons per twelve (12) consecutive month period, rolled on a monthly basis. Compliance with this limit makes 326 IAC 8-1-6 and 326 IAC 2-7 not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), the allowable particulate matter emission rates from the affected processes of this source shall be limited as follows:

(a) the PM emissions from Mixing Process 1 shall not exceed 1.14 lb/hr,
(b) the PM emissions from Mixing Process 2 shall not exceed 1.49 lb/hr,
(c) the PM emissions from Mixing Process 3 shall not exceed 1.49 lb/hr, and
(d) the PM emissions from the small mixing operation shall not exceed 6.30 lb/hr.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.4 Volatile Organic Compounds (VOC)

Compliance with the VOC limitations contained in Condition D.1.1 shall be demonstrated by determining the amount of VOCs generated from the materials used at mixing processes 1, 2, and 3, and the small mixing operation, individually, using the following equations:

Individual VOC Emissions (tons/mo) = 0.968 * [individual amount of VOC generating material (tons/mo)]

Combined Total VOC Emissions (tons/mo) = sum [individual VOC generating materials (tons/mo)]

D.1.5 Particulate Matter (PM)

In order to comply with the limitations of Condition D.1.2, all baghouses for PM control shall be in operation at all times when the respective silicone dioxide manufacturing processes are in operation.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.6 Compliance Monitoring, VOC Limitations

To demonstrate compliance with the limits of Condition D.1.1, the Permittee shall on a monthly basis, record the following for all VOC generating materials used at mixing processes 1, 2, and 3, and the small mixing operation:

(a) the amount of each VOC generating material used each calendar month in pounds per month,

(b) the combined total amount of all VOC generating materials used each calendar month in pounds per month,

(c) the amount of VOC's produced from each VOC generating material used each calendar month in tons per month, as determined utilizing the methods specified in Condition D.1.4, and

(d) the combined total amount of VOC's produced from all VOC generating material used each month in tons per month, as determined utilizing the methods specified in Condition D.1.4.

D.1.7 Compliance Monitoring, Preventive Maintenance Plan

To demonstrate compliance with the requirements of Condition D.1.3, the Permittee shall maintain:

(a) a checklist of the preventive maintenance actions performed, including the dates each preventive maintenance action was performed, and initials after each action verifying that each preventive maintenance action has been performed, and

(b) a log of any additional inspections and preventive measures performed as prescribed in the Preventive Maintenance Plan.

D.1.8 Compliance Monitoring, PM Limitations

To demonstrate compliance with the limitations of Condition D.1.2, the Permittee shall:

(a) perform daily visible emission notations of the baghouse stack exhaust during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed; and

(b) take readings of the total static pressure drop across baghouse BH1, at least once a week, when any of the mixing and drying processes are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 and 8.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain the following records:

(1) a monthly log of the parameters required in Condition D.1.6; and
(2) a copy of all purchase orders and/or invoices necessary to verify the type and amount used.

(b) To document compliance with Condition D.1.2, the Permittee shall maintain records of all inlet and outlet differential static pressure readings recorded and all visible observations made, as required in Condition D.1.8.

(c) To document compliance with Condition D.1.3, the Permittee shall maintain records of all preventive maintenance actions performed, as required in Condition D.1.7.

All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: American Silicones, Inc.
Source Address: 420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address: P.O. Box 90, Garrett, IN 46738-0090
FESOP No.: 033-14394-00075

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: American Silicones, Inc.
Source Address: 420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address: P.O. Box 90, Garrett, IN 46738-0090
FESOP No.: 033-14394-00075

This form consists of 2 pages **Page 1 of 2**

9 This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: American Silicones, Inc.
Source Address: 420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address: P.O. Box 90, Garrett, IN 46738-0090
FESOP No.: 033-14394-00075

Facility: Mixing Process 1
Parameter: Total amount of VOC's generated at Mixing Process 1
Limit: Less than or equal to 24.7 tons per 12 consecutive month period.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: American Silicones, Inc.
Source Address: 420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address: P.O. Box 90, Garrett, IN 46738-0090
FESOP No.: 033-14394-00075

Facility: Mixing Process 2
Parameter: Total amount of VOC's generated at Mixing Process 2
Limit: Less than or equal to 24.7 tons per 12 consecutive month period.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: American Silicones, Inc.
Source Address: 420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address: P.O. Box 90, Garrett, IN 46738-0090
FESOP No.: 033-14394-00075

Facility: Mixing Process 3
Parameter: Total amount of VOC's generated at Mixing Process 3
Limit: Less than or equal to 24.7 tons per 12 consecutive month period.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: American Silicones, Inc.
Source Address: 420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address: P.O. Box 90, Garrett, IN 46738-0090
FESOP No.: 033-14394-00075

Facility: Small Mixing Operation
Parameter: Total amount of VOC's generated at the Small Mixing Operation
Limit: Less than or equal to 24.7 tons per 12 consecutive month period.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name:American Silicones, Inc.
Source Address:420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address:P.O. Box 90, Garrett, IN 46738-0090
FESOP No.:033-14394-00075

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 **NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.**

9 **THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD**

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: ______________________________________

Title/Position: ______________________________________

Date: ______________________________________

Phone: ______________________________________

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a
Federally Enforceable State Operating Permit

Source Name: American Silicones, Inc.
Source Location: 420 North Taylor Street, Garrett, IN 46738-1846
County: DeKalb
SIC Code: 2869
Operation Permit No.: 033-14394-00075
Permit Reviewer: SDF

On July 20, 2001, the Office of Air Quality (OAQ) had a notice published in the Auburn Evening Star in Auburn, Indiana, stating that American Silicones, Inc. had applied for a construction permit to construct and operate two silicone mixing processes to be added to their existing customized silicone manufacturing plant located at 420 North Taylor Street, Garrett, IN 46738-1846. The notice also stated that OAQ proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 21,2001, American Silicones, Inc. submitted comments on the proposed FESOP and submitted additional information regarding these comments on October 22, 2001 The summary of the comments and corresponding responses is as follows:

1. **Comment 1:**

The authorized Individual specified in Condition A.1 should be Tom Lapsley rather than Jim Jones.

Response 1:

Condition A.1 shall be amended as follows to change the authorized individual to Tom Lapsley.

A.1 General Information [326 IAC 2-8-3(b)]
The Permittee owns and operates a amphorus silicone dioxide manufacturing operation.

Authorized individual:	~~Jim Jones~~ **Tom Lapsley**
Source Address:	420 North Taylor Road, Garrett, IN 46738-1846
Mailing Address:	P.O. Box 90, Garrett, IN 46738-0090
SIC Code:	2869
Source Location Status:	Dekalb
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD or Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

2. **Comment 2:**

American Silicones believes that the equipment description of Condition A.2 and the description of Section D.1 is somewhat confusing and would like the description to be as follows:

"Polydimethylsiloxane mixing operations, consisting of one (1) bulk storage silo and three mixing processes described as:

(a) Mixing Process #1, which includes raw material storage hoppers, transfer conveyors, and mixer, with a maximum production rate of 2,500 pounds per batch (313 pounds per hour), with particulate emissions controlled by a baghouse dust collector exhausting inside the building;

(b) Mixing Process #2, which includes raw material storage hoppers, transfer conveyors, and mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector exhausting inside the building; and

(c) Mixing Process #3, which includes raw material storage hoppers, transfer conveyors, and mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector exhausting inside the building."

Response 2:

Upon review of the process descriptions, the following changes are made:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]
This stationary source consists of the following emission units and pollution control devices:

one (1) ~~amphorous silicone dioxide~~ polydimethylsiloxane manufacturing operation consisting of **one (1) 60,000 pound bulk storage silo and:**

(a) ~~two (2) silicone dioxide storage hoppers and one (1) transfer conveyor rated at 17 pounds per hour, with emissions controlled by a baghouse dust collector exhausting inside the building~~ **One (1) mixing process, identified as Mixing Process #1, including one (1) 2,200 pound raw material silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 2,500 pounds per batch (313 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting emissions inside the building;**

(b) ~~two (2) mixing processes, identified as Mixing Process 2 and Mixing Process 3, each consisting of:~~

~~(1) one (1) silicone dioxide raw material storage silo with a maximum design capacity of 2,200 pounds,~~
~~(2) two (2) raw material storage hoppers, with a maximum design throughput of 625 lb raw material per hour, with PM/PM10 emissions controlled by a baghouse dust collector exhausting emissions inside the building,~~
~~(3) one (1) totally enclosed chain transfer conveyor system with a maximum design throughput 625 pounds per hour, and~~
~~(4) one (1) amphorus silicone dioxide mixing tank, with a maximum production rate of 5,000 pounds per batch (625 pounds per hour), with PM/PM10 emissions controlled by a baghouse dust collector exhausting emissions inside the building, and volatile organic compound (VOC) emissions controlled by a cold trap/scrubber system.~~

One (1) mixing process, identified as Mixing Process #2, including one (1) 2,200 pound raw material storage silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting emissions inside the building; and

(c) One (1) mixing process, identified as Mixing Process #3, including one (1) 2,200 pound raw material storage silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting inside the building.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

one (1) ~~amphorous silicone dioxide~~ polydimethylsiloxane manufacturing operation consisting of **one (1) 60,000 pound bulk storage silo and:**

(a) ~~two (2) silicone dioxide storage hoppers and one (1) transfer conveyor rated at 17 pounds per hour, with emissions controlled by a baghouse dust collector exhausting inside the building~~ **One (1) mixing process, identified as Mixing Process #1, including one (1) 2,200 pound raw material silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 2,500 pounds per batch (313 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting emissions inside the building;**

(b) ~~two (2) mixing processes, identified as Mixing Process 2 and Mixing Process 3, each consisting of:~~
~~(1) one (1) silicone dioxide raw material storage silo with a maximum design capacity of 2,200 pounds,~~
~~(2) two (2) raw material storage hoppers, with a maximum design throughput of 625 lb raw material per hour, with PM/PM10 emissions controlled by a baghouse dust collector exhausting emissions inside the building,~~
~~(3) one (1) totally enclosed chain transfer conveyor system with a maximum design throughput 625 pounds per hour, and~~
~~(4) one (1) amphorus silicone dioxide mixing tank, with a maximum production rate of 5,000 pounds per batch (625 pounds per hour), with PM/PM10 emissions controlled by a baghouse dust collector exhausting emissions inside the building, and volatile organic compound (VOC) emissions controlled by a cold trap/scrubber system.~~

(b) One (1) mixing process, identified as Mixing Process #2, including one (1) 2,200 pound raw material storage silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting emissions inside the building; and

(c) One (1) mixing process, identified as Mixing Process #3, including one (1) 2,200 pound raw material storage silo, one (1) transfer conveyor system, and one (1) mixer, with a maximum production rate of 3,500 pounds per batch (438 pounds per hour), with particulate emissions controlled by a baghouse dust collector identified as BH1, exhausting inside the building.

3. Comment 3:

Condition A.3 states that American Silicones does not have any insignificant activities. At the time that American Silicones submitted its permit application for the two proposed new mixing operations, American Silicones believed that the source qualified for a Minor Source Operating Permit (MSOP).

Thus, American Silicones did not complete a GSD10(a) form. American Silicones therefore is submitting the attached GSD10(a) form and requests that the insignificant activities be added to the permit.

Response 3:

Condition A.3 shall be amended as follows to include the submitted insignificant activities.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]
~~This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).~~

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

(b) Degreasing Operations that do not exceed 145 gallons per 12 months.

(c) Cleaners and solvent characterized as:

(1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38 degrees C (100°F), or
(2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20 degrees C (68°F),

the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(d) Closed loop heating and cooling systems.

(e) Paved and unpaved roads and parking lots with public access, and

(f) One (1) laboratory as defined in 326 IAC 2-7-1(20)(C).

4. Comment 4:

Conditions D.1.1, D.1.4, and D.1.7 reference input VOCs. The materials that are used in the mixing operations do not contain any VOCs, but create VOC emissions as the result of reactions that occur during the mixing process.

Therefore, the input VOC references of these conditions should removed.

Response 4:

Conditions D.1.1, D.1.4, and D.1.7 shall be amended as follows to reference the VOCs as “VOC emissions from materials used in the mixing process” instead of “input VOC”.

D.1.1 Volatile Organic Compound (VOC) Emissions [326 IAC 8-1-6 and 326 IAC 2-7]

The ~~input~~ volatile organic compounds (VOC) from all materials used at Mixing Process 2 and Mixing Process 3, each, shall be limited to less than 25 tons per twelve (12) consecutive month period, rolled on a monthly basis. Compliance with this limit makes 326 IAC 8-1-6 and 326 IAC 2-7 not applicable.

D.1.4 Volatile Organic Compounds (VOC)

Compliance with the VOC limitations contained in Condition D.1.1 shall be demonstrated by determining the amount of ~~input~~ VOCs generated from the materials used at mixing processes 2 and 3, individually, based on the formulation data supplied by the manufacturer(s).

D.1.7 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.1.1.

(1) The amount and VOC content of each material used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(2) A log of the dates of use;

(3) The amount of ~~input~~ VOC's produced from the materials used, for each month; and

(4) The total ~~input~~ VOC's produced for each month.

(b) To document compliance with Condition D.1.3, the Permittee shall maintain a log of any additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

In addition, Condition D.1.6 shall be amended as follows to remove the "input" VOC reference.

D.1.6 Monitoring

(a) The Permittee shall record the ~~input~~ **total amount of** VOCs from all VOC generating materials used each month for mixing process 2 and mixing process 3.

(b) Any additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

5. Comment 5:

Although this permit is intended to apply to only the three mixing process lines, American Silicones does process materials in other existing mixers. Therefore, American Silicones requests that an overall 99 tons VOC/yr limit be created to limit the emissions from these mixers.

Response 5:

Upon receipt of additional information regarding the additional mixing operation, it is determined that there is one small batch mixing operation consisting of five batch mixers, with capacities of 2000, 1000, 500, 200, and 100 pounds per batch, respectively.

The materials used in these mixing processes, as submitted by American Silicones, has a maximum TEOS content of 0.5%. The following calculations determine the unrestricted potential to emit from these units.

PM/PM10:

2.0 lb PM/PM10/batch * 1 batch/hr * 8760 hr/yr * 1/2000 ton/lb = 8.76 tons PM/PM10/yr

VOC:

lb material/batch * 0.005 lb TEOS/lb material * 0.88 lb TEOS * 1 batch/hr = lb VOC/hr
lb VOC/hr * 8760 hr/yr * 1/2000 ton/lb = tons VOC/yr

Mixer	Mixer Capacity (lb/batch)	tons VOC/yr
1	2000	38.00
2	1000	19.00
3	500	9.50
4	200	3.80
5	100	1.90
		72.20

Since the unrestricted VOC emissions are estimated to be 72.20 tons/yr, the small batch mixing operation shall be included in the facility description, not the insignificant activities list.

Therefore, the following description shall be added to the facility description of Condition A.2 and the facility description of Section D.1.

; and

(d) One (1) small batch mixing operation, identified as small mixing operation, including five (5) mixing processes, with maximum throughputs of 2,000, 1,000, 500, 200, and 100 pounds per batch, respectively.

In addition, American Silicones has submitted in additional information after the response to comments, that they also wish to produce silicone in mixing process 1 that generates VOC emissions. Since mixing process 1 is not currently permitted to produce silicone that generates VOC emissions, the proposed change will generate an increase in the VOC UPTE.

Therefore, the following calculations determine the updated source unrestricted potential to emit, emissions after controls, and emissions after controls, after application of all limits. The updated emission calculations are based on the emissions from the mixing processes 2 and 3, the new small mixing operation emissions, the new emissions generated by allowing mixing process 1 to produce VOC generating silicones, and the insignificant activity emissions.

REVISED SOURCE UPTE:

A summary of the revised source UPTE is listed below. The detailed calculations follow the summary.

	PM (T/Y)	PM10 (T/Y)	SO2 (T/Y)	NOx (T/Y)	VOC (T/Y)	CO (T/Y)	Single HAP (T/Y)	Combined HAP (T/Y)
Process 1	27.38	27.38	-	-	62.69	-	-	-
Process 2 and 3	54.76	54.76	-	-	125.38	-	-	-
Small Process	8.76	8.76	-	-	72.20	-	-	-
Insignificant Activities	0.30	0.30	neg.	neg.	0.20	3.70	0.49	0.57
Total	**91.20**	**91.20**	**neg.**	**neg.**	**260.47**	**3.70**	**0.49**	**0.57**

1. UPTE From Mixing Processes 2 and 3:

American Silicones has submitted revised VOC estimations which will change the VOC UPTE from mixing processes 2 and 3 as previously determined.

The emissions generated by proposed mixing processes 2 and 3 are still PM, PM10, and VOC (in the form of ethanol). No hazardous air pollutants will be emitted.

The following calculations therefore determine the PM, PM10, and VOC UPTE based on a maximum batch PM/PM10 emission rate of 50 lb/batch, an annual vinyl triethoxysilane (VOC) emission rate of 537 pounds per year, a revised maximum tetraethylorthosilicate (TEOS) emission rate of 114 lb/hr per batch, 3 batches per day, 365 days/yr, and emissions before controls.

PM/PM10:

50 lb PM/PM10/batch * 3 batch/day * 365 day/yr * 1/2000 ton/lb = 27.38 tons PM/PM10/yr
27.38 tons PM/PM10/yr-mixer * 2 mixers = **54.76 tons PM/PM10/yr**

VOC:

[537 lb VOC/yr * 1/2000 ton/lb] + [114 lb VOC/batch * 3 batch/day * 365 day/yr * 1/2000 ton/lb] = [0.27 ton VOC/yr] + [62.42 tons VOC/yr] = 62.69 tons VOC/yr per batch

62.69 tons VOC/yr-mixer * 2 mixers = **125.38 tons VOC/yr**

2. UPTE From Mixing Process 1:

The emissions generated by proposed mixing process 1 are PM, PM10, and VOC (in the form of ethanol). No hazardous air pollutants will be emitted.

The following calculations determine the PM, PM10, and VOC UPTE based on a maximum batch PM/PM10 emission rate of 50 lb/batch, an annual vinyl triethoxysilane (VOC) emission rate of 537 pounds per year, a maximum tetraethylorthosilicate (TEOS) emission rate of 114 lb/hr per batch, 3 batches per day, 365 days/yr, and emissions before controls.

PM/PM10:

50 lb PM/PM10/batch * 3 batch/day * 365 day/yr * 1/2000 ton/lb = **27.38 tons PM/PM10/yr**

VOC:

[537 lb VOC/yr * 1/2000 ton/lb] + [114 lb VOC/batch * 3 batch/day * 365 day/yr * 1/2000 ton/lb] = [0.27 ton VOC/yr] + [62.42 tons VOC/yr] = **62.69 tons VOC/yr per batch**

3. UPTE From the Small Mixing Operation:

The small mixing operation emissions, as previously determined, are listed below:

	PM tons/yr	PM10 tons/yr	VOC tons/yr
Small Mixing Operation	**8.76**	**8.76**	**72.20**

4. UPTE From the Insignificant Activities:

The following calculations determine the insignificant activity UPTE.

Combustion Units:

The following calculations determine the combustion unit UPTE based on natural gas combustion, a combined maximum allowable capacity of 10 MMBtu/hr, AP-42 emission factors, emissions before controls, and 8760 hours of operation.

10.0 MMBtu/hr * 8760 hr/yr * 1 E6 Btu/MMBtu * 1/1000 cf/Btu * 1/1E6 MMcf/cf * Ef lb poll/MMcf * 1/2000 ton poll/lb poll = ton poll/yr

	PM 7.6 lb/MMcf	PM10 7.6 lb/MMcf	SO2 0.6 lb/MMcf	NOx 100 lb/MMcf	VOC 5.5 lb/MMcf	CO 84 lb/MMcf
ton/yr	**0.30**	**0.30**	**neg.**	**neg.**	**0.20**	**3.70**

The combined HAP emissions are determined to be negligible.

Degreasing Operation:

The following calculations determine the degreasing operation UPTE based on the maximum allowable usage of 145 gallons, petroleum distillates, 100% VOC, 100% HAP, a density of 6.8 lb/gal, and emissions before controls.

VOC: 145 gal/yr * 6.8 lb solvent/gal solvent * 1.00 lb VOC/gal VOC * 1/2000 ton VOC/lb VOC = **0.49 tons VOC/yr**

HAP: 145 gal/yr * 6.8 lb solvent/gal solvent * 1.00 lb HAP/gal HAP * 1/2000 ton HAP/lb HAP = **0.49 tons VOC/yr**

Cleaner Usage:

The following calculations determine the cleaner solvent UPTE based on the maximum submitted usage rate of 1 gallon per month, xylene, 100% VOC, 100% HAP, a density of 7.2 lb/gal, and emissions before controls.

VOC: 1 gal solvent/mo * 12 mo/yr * 7.2 lb solvent/gal solvent * 1.00 lb VOC/lb solvent * 1/2000 ton VOC/lb VOC = **0.04 tons VOC/yr**

HAP: 1 gal solvent/mo * 12 mo/yr * 7.2 lb solvent/gal solvent * 1.00 lb HAP/lb solvent * 1/2000 ton HAP/lb HAP = **0.04 tons HAP/yr**

Laboratory:

The following calculations determine the cleaner solvent UPTE based on the maximum submitted usage rate of 1 gallon per month, xylene, 100% VOC, 100% HAP, a density of 7.2 lb/gal, and emissions before controls.

VOC: 1 gal solvent/mo * 12 mo/yr * 7.2 lb solvent/gal solvent * 1.00 lb VOC/lb solvent * 1/2000 ton VOC/lb VOC = **0.04 tons VOC/yr**

HAP: 1 gal solvent/mo * 12 mo/yr * 7.2 lb solvent/gal solvent * 1.00 lb HAP/lb solvent * 1/2000 ton HAP/lb HAP = **0.04 tons HAP/yr**

REVISED SOURCE EMISSIONS AFTER CONTROLS:

The PM/PM10 emissions from mixing processes 1, 2, and 3 are controlled by a baghouse with a design control efficiency of 99%. The small mixing operation PM/PM10 emissions are not controlled and all emissions generated by the insignificant activities are uncontrolled. The following calculations determine the source emissions after controls.

Processes 1, 2, and 3: tons PM/PM10 Before Controls * (1 - 0.99) = tons PM/PM10/yr After Controls

A summary of the revised source emissions after controls is listed below.

	PM (T/Y)	PM10 (T/Y)	SO2 (T/Y)	NOx (T/Y)	VOC (T/Y)	CO (T/Y)	Single HAP (T/Y)	Combined HAP (T/Y)
Process 1	0.27	0.27	-	-	62.69	-	-	-
Process 2 and 3	0.55	0.55	-	-	125.38	-	-	-
Small Process	8.76	8.76	-	-	72.20	-	-	-
Insignificant Activities	0.30	0.30	neg.	neg.	0.20	3.70	0.49	0.57
Total	**9.88**	**9.88**	**neg.**	**neg.**	**260.47**	**3.70**	**0.49**	**0.57**

EMISSIONS AFTER CONTROLS, AFTER LIMITS:

The only pollutant emissions that exceed their respective applicable level, are the VOC emissions. Since the source is a FESOP, the source VOC emissions shall be limited to 99 tons/yr less the insignificant activity VOC emissions (0.20 tons/yr), or 98.8 tons VOC/yr.

99 tons VOC/yr - 0.20 tons VOC/yr = 98.80 tons VOC/yr

In addition, with process 1 being converted to VOC generating production and inclusion of the small mixing operation:

(a) processes 1, 2, and 3, each, shall be limited to less than or equal to 24.7 tons/yr, and
(b) the small mixing operation shall be limited to less than or equal to 24.7 tons/yr,

to avoid the 326 IAC 8-1-6 BACT requirements. Limiting the individual emissions to their respective levels also reduces the combined emissions to less than the 326 IAC 2-8-4 entire source limit of 98.8 tons/yr.

The following table is a summary of the source emissions after controls after application of all limits:

	PM (T/Y)	PM10 (T/Y)	SO2 (T/Y)	NOx (T/Y)	VOC (T/Y)	CO (T/Y)	Single HAP (T/Y)	Combined HAP (T/Y)
Process 1	0.26	0.26	-	-	24.70	-	-	-
Process 2 and 3	0.27	0.27	-	-	24.70	-	-	-
Process 3	0.27	0.27	-	-	24.70			
Small Process	8.76	8.76	-	-	24.70	-	-	-
Insignificant Activities	0.30	0.30	neg.	neg.	0.20	3.70	0.49	0.57
Total	**9.88**	**9.88**	**neg.**	**neg.**	**99.00**	**3.70**	**0.49**	**0.57**

The proposed changes will not affect the level of the permit because after application of emission controls and limits, no pollutant emissions exceed their respective part 70 thresholds.

In addition, the changes proposed by American Silicones will not trigger any new applicable requirements.

However, accounting for the small mixing operation and allowing mixing process 1 to produce silicone via a process that generates VOC emissions, requires changes to several of the existing requirements of the permit. The changes are as follows:

1. Condition C.1:

A new condition (Condition C.1) shall be added to provide an overall source limit.

C.1 Overall Source Limit [326 IAC 2-8]
The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

2. Condition D.1.1:

Condition D.1.1 shall be amended to include limits for mixing process 1 (because it now will generate VOC emissions) and the small mixing operation because it also generates VOC emissions.

In addition, the limits shall be amended to reflect the new individual VOC limits of 24.7 tons per year.

D.1.1 Volatile Organic Compound (VOC) Emissions [326 IAC 8-1-6 and 326 IAC 2-7]
The volatile organic compounds (VOC) from all materials used at Mixing Process 1, Mixing Process 2**,** ~~and~~ Mixing Process 3, **and the small mixing operation,** each, shall be limited to less than **or equal to** ~~25~~**24.7** tons per twelve (12) consecutive month period, rolled on a monthly basis. Compliance with this limit makes 326 IAC 8-1-6 and 326 IAC 2-7 not applicable.

3. Condition D.1.2:

Condition D.1.2 shall be amended to reflect the PM emission changes to Mixing Processes 1, 2, and 3, and the small mixing operation.

Based on the process weight rates of 0.16 ton/hr (313 lb/hr), 0.22 ton/hr (438 lb/hr), 0.22 ton/hr (438 lb/hr), and 1.9 tons/hr (3800 lb/hr combined) for Mixing Process 1, Mixing Process 2, Mixing Process 3, and the small mixing operation, respectively, the new 326 IAC 6-3-2 PM emissions limits are estimated to be 1.14 lb/hr, 1.49 lb/hr, 1.49 lb/hr, and 6.30 lb/hr, respectively.

Condition D.1.2 is therefore amended as follows:

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2]
Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), the allowable particulate matter emission~~s~~ rate**s** from the **affected processes of this source shall be limited as follows:** ~~existing silicone dioxide storage hoppers and transfer conveyor, mixing process 2, and mixing process 3, shall not exceed 2.29, 7.58, and 7.58 pounds per hour, respectively.~~

(a) the PM emissions from Mixing Process 1 shall not exceed 1.14 lb/hr,
(b) the PM emissions from Mixing Process 2 shall not exceed 1.49 lb/hr,
(c) the PM emissions from Mixing Process 3 shall not exceed 1.49 lb/hr, and
(d) the PM emissions from the small mixing operation shall not exceed 6.30 lb/hr.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Since compliance with the limits of 326 IAC 6-3-2 is achieved utilizing the baghouse, the following parametric monitoring requirements shall be added.

D.1.7 Daily Visible Emission Notations

Daily visible emission notations of the baghouse stack exhaust, shall be performed during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

D.1.8 Pressure Drop Readings

The Permittee shall take readings of the total static pressure drop across baghouse BH1, at least once a day when any of the mixing and drying processes are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 and 8.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

Conditions D.1.7 and D.1.8 shall be renumbered D.1.9 and D.1.10, respectively.

4. Condition D.1.4:

Condition D.1.4 shall be amended to include mixing process 1 (because it now will generate VOC emissions) and the small mixing operation because it also generates VOC emissions.

D.1.4 Volatile Organic Compounds (VOC)

Compliance with the VOC limitations contained in Condition D.1.1 shall be demonstrated by determining the amount of VOCs generated from the materials used at mixing processes **1,** 2**,** and 3, **and the small mixing operation,** individually, based on the formulation data supplied by the manufacturer(s).

5. Condition D.1.6:

Condition D.1.6 shall be amended to include mixing process 1 and the small mixing operation.

D.1.6 Monitoring

(a) The Permittee shall record the total amount of VOCs from all VOC generating materials used each month for mixing process**es 1,** 2**,** and ~~mixing process~~ 3**, and the small mixing operation**.

(b) Any additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

6. Condition D.1.7 (now Condition D.1.9):

The record keeping requirements of Condition D.1.7 (now Condition D.1.9) shall be amended as follows to require record keeping of the parametric monitoring requirements.

Paragraph (a) shall be amended by removing (a)(1) - (4) out of the record keeping requirement and moving the requirements to Condition D.1.6 of the Compliance Monitoring Section. Paragraph (a) shall then require records as required in Condition D.1.6.

A new paragraph (b) shall be added to require record keeping of the parametric measurements and observations.

Paragraph (c) shall be amended by removing the specific monitoring requirements associated with the preventive maintenance plan and moving the requirements to Condition D.1.6.

Following the above changes, to maintain consistency in the monitoring requirements (one monitoring condition for each individual limit), Condition D.1.6 shall be split into Conditions D.1.6 and D.1.7, with Condition D.1.6 specifying the monitoring requirements for the limits of Condition D.1.1 and Condition D.1.7 specifying the monitoring requirements for the limits of Condition D.1.3.

In addition, the parametric monitoring requirements of new Conditions D.1.7 and D.1.8 shall be combined into one Condition D.1.8.

The record keeping and reporting requirements shall still be identified as Conditions D.1.9 and D.1.10, respectively.

Thus, the changes to Conditions D.1.6 - D.1.9 are as follows:

D.1.6 **Compliance** Monitoring**, VOC Limitations**

~~(a)~~ **To demonstrate compliance with the limits of Condition D.1.1, t**he Permittee shall **on a monthly basis,** record the **following** ~~total amount of VOCs from~~ **for** all VOC generating materials used ~~each month for~~ **at** mixing process**es 1,** 2**,** and ~~mixing process~~ 3**, and the small mixing operation:** ~~.~~

(~~1~~**a**) the amount and VOC content of each material used. Records shall include purchase orders, invoices, ~~and~~ material safety data sheets (MSDS)**, and calculations** necessary to verify the type and amount used**;** ~~.~~

(~~2~~**b**) a log of the dates of use;

(~~3~~**c**) the amount of VOC's produced from the materials used, for each month; and

(~~4~~**d**) the total VOC's produced for each month.

~~(b) Any additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.~~

D.1.7 **Compliance** Monitoring**, Preventive Maintenance Plan**

To demonstrate compliance with the requirements of Condition D.1.3, the Permittee shall maintain:

(a) a checklist of the preventive maintenance actions performed, including the dates each preventive maintenance action was performed, and initials after each action verifying that each preventive maintenance action has been performed, and

(b) a log of ~~A~~any additional inspections and preventive measures ~~shall be~~ performed as prescribed in the Preventive Maintenance Plan.

D.1.8 ~~Daily Visible Emission Notations~~ Compliance Monitoring, PM Limitations

To demonstrate compliance with the limitations of Condition D.1.2, the Permittee shall:

(a) perform ~~D~~daily visible emission notations of the baghouse stack exhaust~~, shall be performed~~ during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed~~.~~**; and**

~~D.1.8 Pressure Drop Readings~~

(b) ~~The Permittee shall~~ take readings of the total static pressure drop across baghouse BH1, at least once a day, when any of the mixing and drying processes are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 and 8.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain~~ the following records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.1.1.~~

~~(1) The amount and VOC content of each material used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.~~

~~(2) A log of the dates of use;~~

~~(3) The amount of VOC's produced from the materials used, for each month; and~~

~~(4) The total VOC's produced for each month.~~ **records of the VOC parameters required in Condition D.1.6.**

(b) **To document compliance with Condition D.1.2, the Permittee shall maintain records of all inlet and outlet differential static pressure readings recorded and all visible observations made, as required in Condition D.1.8.**

(c) To document compliance with Condition D.1.3, the Permittee shall maintain **records of all preventive maintenance actions performed, as required in Condition D.1.7**.

All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

7. Reporting Requirements and Report Forms:

No further changes to the record keeping and reporting requirements of Conditions D.1.7 and D.1.8 (now Conditions D.1.9 and D.1.10) are necessary because these conditions are written such that record keeping and reporting is required of all applicable VOC emitting processes and operations, including the new limit processes.

However, the two existing reporting forms (for mixing processes 2 and 3) shall be amended as follows to reflect the new limits and remove all references to "input" VOCs.

a. Mixing Process 2 Form:

Parameter: ~~Input~~ **Total amount of** VOC**'s generated at Mixing Process 2**
Limit: Less than **or equal to** ~~25~~ **24.7** tons per 12 consecutive month period.

b. Mixing Process 3 Form:

Parameter: ~~Input~~ **Total amount of** VOC**'s generated at Mixing Process 3**
Limit: Less than **or equal to** ~~25~~ **24.7** tons per 12 consecutive month period.

In addition, two new reporting forms, identical to the forms for mixing processes 2 and 3, shall be created; one for Mixing Process 1, and one for the small mixing operation.

Comment 6:

The technical support document references the scrubber/cold trap system as the means by which the VOC emissions are reduced. This is not the case. The VOC emissions are reduced by following the silicone recipe and mixing the raw materials properly. Thus, this reference should be removed.

Response 6:

The only changes made after the comment period are to the permit. These changes are explained in the addendum to the technical support document. Therefore, since scrubber/cold trap system is not referenced in the permit, no changes shall be made.

Comment 7:

The Office of Air Quality comments that more specific information is needed in Condition D.1.4 to establish how the source will estimate the VOC emissions.

Response 7:

Upon review of Condition D.1.4 and additional information submitted by American Silicones, it is determined that the VOC emissions should be determined using the following equation.

0.968 * [lb TEOS/mo + lb VTEOS/mo + lb A-172/mo + lb A-174 + TMBX/mo] * 1/2000 ton/lb = tons VOC/mo

To produce their final product, American Silicones utilizes 5 materials that generate ethanol (VOC) as a byproduct of the reactions that take place making the product. Based on the empirical formulas for the various reactions, it is determined that the worst case reaction produces 0.968 lb VOC/lb material.

Therefore, the monthly VOC emissions are estimated utilizing the total amount of the 5 VOC producing materials (TEOS, VTEOS, A-172, A-174, and TMBX) used in a month times the worst case VOC fraction (0.968), and then converting the pounds per month to tons per month by dividing the pounds per month by 2000.

Thus, Condition D.1.4 shall be revised to read as follows:

D.1.4 Volatile Organic Compounds (VOC)

Compliance with the VOC limitations contained in Condition D.1.1 shall be demonstrated by determining the amount of VOCs generated from the materials used at mixing processes 1, 2, and 3, and the small mixing operation, individually, ~~based on the formulation data supplied by the manufacturer(s).~~ **using the following equations:**

Individual VOC Emissions (tons/mo) = 0.968 * [individual amount of VOC generating material (tons/mo)]

Combined Total VOC Emissions (tons/mo) = sum [individual VOC generating materials (tons/mo)]

Further, since the worst case VOC fraction is used, compliance monitoring condition D.1.6 shall be revised as follows:

D.1.6 Compliance Monitoring, VOC Limitations

To demonstrate compliance with the limits of Condition D.1.1, the Permittee shall on a monthly basis, record the following for all VOC generating materials used at mixing processes 1, 2, and 3, and the small mixing operation:

(a) ~~the amount and VOC content of each VOC producing material used. Records shall include:~~ **the amount of each VOC generating material used each calendar month in tons per month,**

(b) the combined total amount of all VOC generating materials used each calendar month in tons per month,

(c) the amount of VOC's produced from ~~the~~ **each VOC generating material used each calendar month in tons per month, as determined utilizing the methods specified in Condition D.1.4, and** ~~materials used, for each month; and~~

(d) the **combined** total **amount of** VOC's produced **from all VOC generating material used each month in tons per month, as determined utilizing the methods specified in Condition D.1.4** ~~for each month.~~**.**

~~(b) a log of the dates of use;~~

Finally, the record keeping requirements of Condition D.1.9 shall be revised as follows:

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain **the following** records**:** ~~of the VOC parameters required in Condition D.1.6.~~

(1) a monthly log of the parameters required in Condition D.1.6; and
(2) a copy of all purchase orders and/or invoices necessary to verify the type and amount used.

(b) To document compliance with Condition D.1.2, the Permittee shall maintain records of all inlet and outlet differential static pressure readings recorded and all visible observations made, as required in Condition D.1.8.

(c) To document compliance with Condition D.1.3, the Permittee shall maintain records of all preventive maintenance actions performed, as required in Condition D.1.7.

All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit

Source Background and Description

Source Name:	**American Silicones, Inc.**
Source Location:	**420 North Taylor Street, Garrett, IN 46738-1846**
County:	**DeKalb**
SIC Code:	**2869**
Operation Permit No.:	**033-14394-00075**
Permit Reviewer:	**Scott Fulton**

On May 11, 2001, the Office of Air Quality (OAQ) received an application from American Silicones, Inc. relating to the construction and operation of two amphorus silicone dioxide mixing processes to be added to their existing customized silicone manufacturing plant located at 420 North Taylor Street, Garrett, IN 46738-1846. The source consists of the following facilities:

one (1) amphorous silicone dioxide manufacturing operation consisting of:

(a) two (2) silicone dioxide storage hoppers and one (1) transfer conveyor rated at 17 pounds per hour, with emissions controlled by a baghouse dust collector exhausting inside the building; and

(b) two (2) mixing processes, identified as Mixing Process 2 and Mixing Process 3, each consisting of:

(1) one (1) silicone dioxide raw material storage silo with a maximum design capacity of 2,200 pounds,
(2) two (2) raw material storage hoppers, with a maximum design throughput of 625 lb raw material per hour, with PM/PM10 emissions controlled by a baghouse dust collector exhausting emissions inside the building,
(3) one (1) totally enclosed chain transfer conveyor system with a maximum design throughput 625 pounds per hour, and
(4) one (1) amphorus silicone dioxide mixing tank, with a maximum production rate of 5,000 pounds per batch (625 pounds per hour), with PM/PM10 emissions controlled by a baghouse dust collector exhausting emissions inside the building, and volatile organic compound (VOC) emissions controlled by a cold trap/scrubber system.

History

On July 28, 2000, American Silicones, Inc. was issued an exemption to construct and operate a customized silicone manufacturing plant located at 420 North Taylor Street, Garrett, IN 46738-1846. The source at that time consisted of two (2) silicone dioxide storage hoppers and one (1) transfer conveyor. The PM/PM10 emissions were controlled by a baghouse dust collector exhausting inside the building.

On May 11, 2001, American Silicones, Inc. submitted an application to construct and operate the two (2) new silicone mixing processes consisting of the equipment listed in the above source description.

Enforcement Issues

There are no enforcement actions pending against this emission source.

Stack Summary

There are no stacks associated with this emission source.

Recommendation

The staff recommends to the Commissioner that the revision be approved as a Federally Enforceable State Operating Permit (FESOP). This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on May 11, 2001.

Emission Calculations

UNRESTRICTED POTENTIAL TO EMIT (UPTE):

Existing Source:

The silicone dioxide storage hoppers and transfer conveyor generate PM/PM10 emissions. The following calculations determine the UPTE from this equipment:

50 lb PM/PM10/batch * 1 batch/ 3 days * 1/8 day/hr = 2.083 lb PM/PM10/hr

2.083 lb PM/PM10/hr * 8760 hr/yr * 1/2000 tons/lb = **9.13 tons PM/PM10/yr**

Proposed Equipment:

The emissions generated by the two proposed mixing processes are PM, PM10, and VOC (in the form of ethanol). No hazardous air pollutants will be emitted.

The following calculations determine the PM, PM10, and VOC UPTE based on a maximum batch PM/PM10 emission rate of 50 lb/batch, an annual vinyl triethoxysilane (VOC) emission rate of 537 pounds per year, a maximum tetraethylorthosilicate (TEOS) emission rate of 141 lb/hr per batch, 3 batches per day, 365 days/yr, and emissions before controls.

PM/PM10:

50 lb PM/PM10/batch * 3 batch/day * 365 day/yr * 1/2000 ton/lb = 27.38 tons PM/PM10/yr
27.38 tons PM/PM10/yr-mixer * 2 mixers = **54.76 tons PM/PM10/yr**

VOC:

[537 lb VOC/yr * 1/2000 ton/lb] + [141 lb VOC/batch * 3 batch/day * 365 day/yr * 1/2000 ton/lb] =

[0.27 ton VOC/yr] + [77.20 tons VOC/yr] = 77.47 tons VOC/yr per batch

77.47 tons VOC/yr-mixer * 2 mixers = **154.94 tons VOC/yr**

EMISSIONS AFTER CONTROLS:

Existing Source:

The PM/PM10 emissions from the units of the existing source are controlled by a baghouse with a design control efficiency of 99%. The following calculations determine the emissions after controls.

9.13 tons PM/PM10 * (1 - 0.99) = **0.09 ton PM/PM10/yr**

Proposed Source:

PM/PM10:

The PM/PM10 emissions from the proposed equipment are controlled by baghouses, each with a control efficiency of 99%. The following calculations determine the emissions after controls.

54.76 tons PM/PM10/yr * (1 - 0.99) = **0.55 tons PM/PM10/yr**

VOC:

The VOC emissions are controlled by a cold trap/scrubber system with a design control efficiency of 98%. The following calculations determine the emissions after controls.

154.94 tons VOC/yr * (1 - 0.98) = **3.10 tons VOC/yr**

EMISSIONS AFTER CONTROLS, AFTER LIMITS:

The source has proposed that mixing processes 2 and 3, each, be limited to less than 25 tons VOC/yr to avoid the 326 IAC 8-1-6 BACT requirements. To achieve this, the source will use the cold trap/scrubber control system. Therefore, the combined adjusted VOC emission rate is determined to be < 50 tons/yr.

Unrestricted Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

The new source potential to emit is as follows:

Pollutant	Potential To Emit (tons/year)
PM	63.89
PM-10	63.89
SO_2	0
VOC	154.94
CO	0
NO_x	0

HAP's	Potential To Emit (tons/year)
Single HAP	0
Total HAP	0

The unrestricted PM, PM10, and VOC potential to emit from the proposed mixing processes increase the source PM, PM10, and VOC emission rates to greater than the respective 326 IAC 2-5.1(a)(3) applicable level of 25, 25, and 25 tons per year. Therefore, the source is subject to 326 IAC 2-6.1, 326 IAC 2-8, or 326 IAC 2-7.

County Attainment Status

The source is located in DeKalb County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

DeKalb County has been classified as attainment or unclassifiable for all pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Criteria Pollutant	**Emissions** (tons/year)
PM	2.41
PM_{10}	2.41
SO_2	0
VOC	0
CO	0
NO_X	0

	Emissions (tons/year)
Combined HAPs	0

(a) This existing source is not a major PSD stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
(b) The existing source is not a major Part 70 stationary source because no criteria pollutants are emitted at a rate greater than 100 tons per year and there are no hazardous air pollutants (HAP) emitted.

Source Status After the Modification

The table below summarizes the source potential to emit after installation of the proposed equipment, based on emissions after controls, and reflecting all limits. The control equipment is considered federally enforceable only after issuance of this FESOP.

	Potential to Emit (tons/year)						
Process/facility	PM	PM_{10}	SO_2	VOC	CO	NO_X	HAPs
Source After Proposed Revision	**0.64**	**0.64**	**0**	**<50.00**	**0**	**0**	**0**

Part 70 Major Source Threshold	-	100	100	100	100	100	10 ind. 25 tot.
PSD Major Source Level	250	250	250	250	250	250	-

(a) Mixing processes 2 and 3, each, are limited to less than 25 tons VOC/yr. Therefore the BACT requirements of 326 IAC 8-1-6 and the Part 70 requirements of 326 IAC 2-7 do not apply.

(b) Since the VOC emissions are “limited” to less than the Part 70 applicable level of 100 tons per year, the source is required to obtain a Federally Enforceable State Operating Permit (FESOP) under 326 IAC 2-8.

(c) Since the potential to emit from the entire source of all criteria pollutant emissions after the modification are less than 250 tons per year, the source is still determined not to be major PSD stationary source. Therefore, pursuant to 326 IAC 2-2 and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control). The source does not have potential to emit hazardous air pollutants.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it does not have the potential to emit more than one hundred (100) tons per year of any pollutant specified in the rule.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Particulate Emissions Limitations)

The existing source emissions units and the proposed mixing processes are subject to 326 IAC 6-3-2.

Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), the allowable particulate matter emissions rate from the existing silicone dioxide storage hoppers and transfer conveyor and the proposed mixing processes, which have maximum process weight rates of 845 lb/hr (0.42 ton/hr), 5000 lb/hr (2.5 tons/hr), and 5000 lb/hr (2.5 tons/hr), respectively, shall not exceed 2.29, 7.58, and 7.58 pounds per hour, respectively.

E = 4.10 * P^(0.67) =

where: P = process weight rate (tons/hr)
E = allowable PM emission rate (lb PM/hr)

= 4.10 * [0.42 ton/hr]^0.67 =2.29 lb PM/hr
= 4.10 * [2.50 ton/hr]^0.67 =7.58 lb PM/hr
= 4.10 * [2.50 ton/hr]^0.67 =7.58 lb PM/hr

The estimated PM emissions after controls from the existing silicone dioxide storage hoppers and one (1) transfer conveyor, and mixing processes are estimated to be 0.02, 0.06, and 0.06 lb/hr, respectively, which are less than the 326 IAC 6-3-2 limits of 2.29, 7.58, and 7.58 lb/hr, respectively.

9.13 tons PM/yr * 1/8760 yr/hr * 2000 lb/ton * (1 - 0.99) =0.02 lb PM/hr
27.38 tons PM/yr * 1/8760 yr/hr * 2000 lb/ton * (1 - 0.99)=0.06 lb PM/hr
27.38 tons PM/yr * 1/8760 yr/hr * 2000 lb/ton * (1 - 0.99)=0.06 lb PM/hr

Thus, compliance is determined to be achieved.

The control equipment shall be in operation at all times this emission unit is in operation, in order to comply with this limit.

326 IAC 8-1-6:

Since there are no other 326 IAC Article 8 rules that apply to mixing processes 2 and 3, and the unrestricted potential to emit from each process is greater than 25 tons per year, 326 IAC 8-1-6 applies to mixing processes 2 and 3.

Since the source has agreed to limit the VOC emission from each of these processes to less than 25 tons per year, 326 IAC 8-1-6 does not apply.

Testing Requirements

PM/PM10:

Pursuant to the stack testing guidance “Stack Testing Requirements in Construction Permits”, issued on January 1, 1999, stack testing is required if:

(a) there is an applicable NSPS or NESHAP,
(b) there are any emission units subject to 326 IAC 6-1,
(c) there are any emission units with unrestricted potential to emit greater than 40 tons per year than use a control device to come into compliance with an applicable standard,
(d) there are any control devices used to satisfy a synthetic minor limit,
(e) there are any emission units which utilize an unapproved “alternate” emission factor, and
(f) there is a non-compliant emission unit.

There are no NSPS or NESHAPs that apply to the source, there are no units that are subject to 326 IAC 6-1, the control devices are not used to satisfy a synthetic minor, no unapproved “alternate” emission factors are used, there are no emission units with unrestricted potential to emit of PM/PM10 greater than 40 tons per year, and all the emission units are in compliance with all applicable standards.

Thus, no PM/PM10 stack testing shall be required.

VOC:

The source volatile organic compounds (VOC) are generated from two sources; vinyl triethoxysilane (VTEOS) and tetrathylorthosilicate (TEOS). These compounds produce VOC in the form of ethanol.

The expected total annual use of these compounds is estimated to be 739.6 pounds of VTEOS (0.37 tons VTEOS/yr) and 3,634.8 pounds of TEOS (1.82 tons TEOS/yr) per mixer. The VOC emissions from each mixer are limited to less than 25 tons per year.

Since the total actual annual weight of the VTEOS and TEOS (2.19 tons/yr-mixer) is less than the limit of 25 tons per year-mixer, keeping records of the amount of VTEOS and TEOS shall be sufficient to demonstrate compliance with the emission rate limits.

Further, although a cold trap/scrubber system used by the source, said control is not necessary to achieve compliance with the VOC limitations.

Thus, no VOC stack testing shall be required.

Compliance Monitoring:

Pursuant to the Office of Air Quality (OAQ) guidance for compliance monitoring of major and minor source operating permits, May 14, 1996, compliance monitoring plans shall be required if a source that emits particulate matter, sulfur dioxide, or volatile organic compounds with applicable requirements if:

(a) there is an applicable NSPS or NESHAP, or
(b) the source has applicable units that have a control device whose after control emissions exceed 10 lb/hr, or
(c) the source has applicable units without a control device whose actual emissions exceed 25 lb/hr.
(d) the source has applicable units that would be subject to an applicable requirement, but are limited out of that requirement.

There are no applicable NSPS or NESHAP that apply, there are no emission units with controlled emissions greater than 10 lb/hr, and there are no units with actual emissions greater than 25 lb/hr.

However, the VOC emissions from mixing units 2 and 3 are limited such that the applicable requirement 326 IAC 8-1-6 does not apply. Thus, a preventive maintenance plan and compliance monitoring is required.

To demonstrate compliance with the less than 25 ton VOC/yr emission rate limits, the source shall keep monthly records of the amount of VTEOS and TEOS used at the plant and the respective monthly VOC emissions. Said records shall be maintained for a minimum period of 5 years, with the source making them available upon request of the OAQ.

Conclusion

The construction and operation of these facilities shall be subject to the conditions of the attached exemption, No. 033-14394-00075.